SEQUENCE LISTING

```
<110> BERENS, STEPHAN
KALINOWSKI, JORN
PUHLER, ALFRED
```

<120> CORYNEBACTERIUM GLUTAMICUM STRAIN WITH
 ENHANCED SECRETION ACTIVITY

```
<130> MAS/21123/280248
```

<140> 09/852,053 <141> 2001-05-10

<150> EPO 00110021.3

<151> 2000-05-12

<160> 24

<170> PatentIn Ver. 2.1

<210> 1

<211> 1960

<212> DNA

<213> Corynebacterium glutamicum

<220>

<221> misc_feature

<222> (34)..(1944)

<223> secD

<400> 1

ttgtctggtt gattggaatt gaaggagact ttcttggctc ggcaaaaaaa gagtgccgct 60 agegeetggg aaegatggee aaaaegegea atagegttgt ttgtgeteat egtegttggt 120 gtttatgcgt tggtgctgtt gacaggcgat cgttctgcca caccaaaatt gggtattgat 180 ctgcaaggcg gaacccgagt gaccctcgtg ccgcaggggc aggatccaac tcaggaccaq 240 ctgaatcagg cacgcaccat tctggaaaac cgtgtgaacg gcatgggcgt ttcaggtqca 300 agogtgqtcg ctgacqqtaa cacqctqqtq atcactqttc ccqqqqaaaa taccqcacaq 360 gegeaatece taggaeagae eteceagetg etgtteegte eegttggtea ggeaggaatg 420 cccgatatga ccacgttgat gccagagctg gaagagatgg ccaacaggtg ggttgaatac 480 ggcgtcatca ccgaagagca ggcaaatgcc tccttggagg aaatgaacac cgctgttgca 540 tegaceaetg eggtggaagg egaagaagea aetgageeag aaceegteae egtgteggeg 600 acccctatgg atgagccagc caactccatt gaggcaacac agcgacgcca ggaaatcacg 660 gacatgctgc gcaccgaccg ccagtccacc gatcccactg tccagatcgc tgcaagttct 720 ttgatgcagt gcaccactga tgagatggat cctttggccg gcaccqatqa tccacqcctq 780 ccattggtgg catgtgatec agetgtaggt ggcgtgtatg tacttgatec tqcacctttq 840 ctcaacggcg aaaccgatga ggaaaatggt gcgcgcctaa ccggtaatga gatcgatacc 900 aaccgtccca tcaccggtgg attcaacgcc cagtccggcc agatggaaat cagctttqcc 960 ttcaaatccg gcgatgggga agaaggetet gcaacttggt cetetetgae cagecaqtae 1020 ctgcagcage agategeeat caecetggae teteaggtga tttetqcaee eqtqattcaq 1080 tragrance etgtgggtte tgeaacatee atcaceggtg acttractea aactgaagee 1140 caagatetgg cgaacaacet gegetaeggt geattgeece tgagettege aggtgaaaac 1200 ggcgagogcg gcggaactac caccaccgtt ccgccatcac taggcgcagc atccttgaag 1260 gccggactga tcgcaggcat cgtcggcatc gcgctggtcg ccatcttcgt gttcgcctac 1320 taccgcgtct tcggattcgt ttccctgttc accctgtttg ccgcaggcgt gttggtctac 1380 ggccttctgg tactgctggg acgctggatc ggatattccc tagaccttgc tggtatcgcc 1440 ggtttgatca tcggtatcgg taccaccgcc gactcettcg tggtgttcta tqaqcqcatc 1500 aaggatgaga teegtgaagg aagateettt agatetgeag taeetegtge atgggaaage 1560

```
gccaagcgca ccatcgtcac aggcaacatg gtcactttgc tcggcgctat cgtgatttac 1620
 ttgctcgcgg tcggcgaagt caagggcttt gccttcaccc tgggtctgac caccgtattc 1680
 gatctcgttg tcaccttcct gatcacggca ccactggtta tcctggcatc acgcaaccca 1740
 ttctttgcca agtcatcggt caacggcatg ggacgagtga tgaagctcgt tgaagaacgc 1800
 cgcgccaacg gtgaattgga tgagcctgag tacctgaaaa agatccatgc caagaatgcg 1860
 gcagctgata aggettecae tgacaattet tecaetgaca attetgaage acetggeace 1920
 gatacgaacc aagaggagga gaagtagcca tgactgattc
 <210> 2
 <211> 1562
 <212> DNA
 <213> Corynebacterium glutamicum
<220>
<221> misc feature
<222> (22)..(1230)
<223> secF
<400> 2
ccaagaggag gagaagtagc catgactgat tcccagactg aatcactgtc aactcagagc 60
gtaaaaccag ccaaaaaacg cagttggttc aacagcctct acaccggtga cggcggcatt 120
gacttcatcg ccaaaaccaa actgtggtac tggatcaccg gcattttgct ggttatctcg 180
atcctgttca tcgccatccg tggcttctcc ctgagcatcg atttccaggg cggtaccaag 240
atgagcatgc cagcatcgga ttactccacc gaacaggtgg aggaaacctt tactgaagcc 300
accggcatta ctccggaaat cgtgcagatc gtcggttccg gcgacgcccg caccctggag 360
atctactccg agcgactcag cgatgaggat gtagaaaaag cccgcctggc gatctacgag 420
gaataccaac ccctaaactc tgagggccag ccaagcccag atgccatcgg taattccacg 480
gtgtcggaat catggggttc caccatcacc caacgcatgg tgttggctct gattgccttc 540
ctggttattg cagcgatcta cattgctttc cgcctcgagc gtgaaatggc catcgccgcc 600
atggcagcat tggttgttga cggcatcgtc atcgccggca tctacgccgt catcggcctc 660
gaagtateee cageaacegt categgtetg etcacegtge tgacettete catetacgae 720
accgtcgtgg tctttgacaa ggtcagagaa aacaccgaag gcttcgaagg cagccgcaga 780
cgaacctacg ccgaacaagc caacctggcg gtcaaccaga ccttcatgcg ttcgatctcc 840
acgacaatca tetetgeact teegateate getttgatgg ttgtegeegt etggatgatg 900
ggtgttggca ccctcaaaga cctcgcactg atccagctga tcggcgtcat cgaaggcacc 960
ttctcctccg tcttcctggc aaccccactg ctggtcagcc tgaaaaaccg cctgagcaaa 1020
accaaagege acacegette egttatgaag ttgegegaeg gecaaageae gettategae 1080
gccaccccac acaccaacgc cgacgcctcc gcgcacggca ccgaaagcga cactgacggt 1140
gtgacccccg aagcacctgc aaaacgtaca gtaagcaaac ccattgtgga tgatcaccga 1200
tcaagcggaa cctggcgacc aggcagaagc taaaccaatt ggagaacgaa gaaaaatccc 1260
gcagactcgc gttctgcggg attttttttg tgcgtctatg actcacgatg ttcccaaacg 1320
acgacttcac gtggtcgact tcagtcggat ttgccgtttt tatccagtga agtcggctca 1380
tgagaagttg agcacgcgaa gtcgtaggtt gaggtctcgt aatctgcggt gtcgtaggtt 1440
gagatgtcgc cgccttaagt tcgatttctc accttcgata cctcacgctc aatttcttat 1500
gttcgagacc gctaggaaaa gcaccaaaaa ccgactgaaa ttgagtttgg gaaattgagc 1560
gc
<210> 3
<211> 637
<212> PRT
<213> Corynebacterium glutamicum
<220>
<221> PROPEP
<222> (1)..(637)
<223> secD
```

<400>3

Met Ala Arg Gln Lys Lys Ser Ala Ala Ser Ala Trp Glu Arg Trp Pro 1 5 10 15

Lys Arg Ala Ile Ala Leu Phe Val Leu Ile Val Val Gly Val Tyr Ala 20 25 30

Leu Val Leu Leu Thr Gly Asp Arg Ser Ala Thr Pro Lys Leu Gly Ile 35 40 45

Asp Leu Gln Gly Gly Thr Arg Val Thr Leu Val Pro Gln Gly Gln Asp 50 55 60

Pro Thr Gln Asp Gln Leu Asn Gln Ala Arg Thr Ile Leu Glu Asn Arg 65 70 75 80

Val Asn Gly Met Gly Val Ser Gly Ala Ser Val Val Ala Asp Gly Asn 85 90 95

Thr Leu Val Ile Thr Val Pro Gly Glu Asn Thr Ala Gln Ala Gln Ser 100 105 110

Leu Gly Gln Thr Ser Gln Leu Leu Phe Arg Pro Val Gly Gln Ala Gly
115 120 125

Met Pro Asp Met Thr Thr Leu Met Pro Glu Leu Glu Glu Met Ala Asn 130 135 140

Arg Trp Val Glu Tyr Gly Val Ile Thr Glu Glu Gln Ala Asn Ala Ser 145 150 155 160

Leu Glu Glu Met Asn Thr Ala Val Ala Ser Thr Thr Ala Val Glu Gly
165 170 175

Glu Glu Ala Thr Glu Pro Glu Pro Val Thr Val Ser Ala Thr Pro Met 180 185 190

Asp Glu Pro Ala Asn Ser Ile Glu Ala Thr Gln Arg Arg Gln Glu Ile 195 200 205

Thr Asp Met Leu Arg Thr Asp Arg Gln Ser Thr Asp Pro Thr Val Gln 210 215 220

Ile Ala Ala Ser Ser Leu Met Gln Cys Thr Thr Asp Glu Met Asp Pro 225 230 235 240

Leu Ala Gly Thr Asp Asp Pro Arg Leu Pro Leu Val Ala Cys Asp Pro
245 250 255

Ala Val Gly Gly Val Tyr Val Leu Asp Pro Ala Pro Leu Leu Asn Gly
260 265 270

Glu Thr Asp Glu Glu Asn Gly Ala Arg Leu Thr Gly Asn Glu Ile Asp 275 280 285

Thr Asn Arg Pro Ile Thr Gly Gly Phe Asn Ala Gln Ser Gly Gln Met 290 295 300